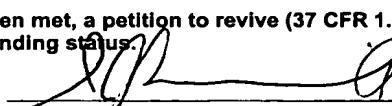


|  |  |   |
|--|--|---|
| FORM PTO-1390 (Modified) U.S. PATENT AND TRADEMARK OFFICE; U.S. DEPARTMENT OF COMMERCE (REV. 12-2004)  |  | ATTORNEY'S DOCKET NUMBER<br><b>345US (P31278-A USA)</b>                                 |
| <b>TRANSMITTAL LETTER TO THE UNITED STATES<br/>DESIGNATED/ELECTED OFFICE (DO/EO/US)<br/>CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>  |  | U.S. APPLICATION NO. (If known, see 37 CFR 1.5)<br><b>107582313</b><br>Not Yet Assigned |
| INTERNATIONAL APPLICATION NO.<br><b>PCT/US2004/041434</b>  | INTERNATIONAL FILING DATE<br><b>December 8, 2004</b> | PRIORITY DATE CLAIMED<br><b>December 8, 2003</b>  |
| <b>TITLE OF INVENTION</b><br><b>DIFFERENTIAL ENERGY COMPOSITES AND METHOD OF MANUFACTURING SAME</b>  |  |   |
| <b>APPLICANT(S) FOR DO/EO/US</b><br><b>CREE, James W.</b>  |  |   |
| <p>Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:</p> <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.</li> <li>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.</li> <li>3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (24) indicated below.</li> <li>4. <input checked="" type="checkbox"/> The US has been elected (Article 31).</li> <li>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371 (c)(2))             <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input checked="" type="checkbox"/> has been communicated by the International Bureau.</li> <li>c. <input checked="" type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).             <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ol> </li> <li>7. <input type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))             <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</li> <li>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)). (unexecuted)</li> <li>10. <input type="checkbox"/> An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).</li> <li>11. <input type="checkbox"/> A copy of the International Preliminary Examination Report (PCT/IPEA/409).</li> <li>12. <input checked="" type="checkbox"/> A copy of the International Search Report (PCT/ISA/210).</li> </ol> <p><b>Items 13 to 23 below concern document(s) or information included:</b></p> <ol style="list-style-type: none"> <li>13. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</li> <li>14. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</li> <li>15. <input checked="" type="checkbox"/> A <b>FIRST</b> preliminary amendment.</li> <li>16. <input type="checkbox"/> A <b>SECOND</b> or <b>SUBSEQUENT</b> preliminary amendment.</li> <li>17. <input type="checkbox"/> A substitute specification.</li> <li>18. <input type="checkbox"/> A power of attorney and/or change of address letter.</li> <li>19. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13/ter.2 and 37 CFR 1.821 - 1.825.</li> <li>20. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).</li> <li>21. <input type="checkbox"/> A second copy of the English language translation of the International Application under 35 U.S.C. 154(d)(4).</li> <li>22. <input checked="" type="checkbox"/> Express Mail Label No. <b>EV 917369426 US</b></li> <li>23. <input checked="" type="checkbox"/> Other items or information:<br/><br/><b>See Sheet "A" attached</b></li> </ol> |  |   |

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

|   |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
|---|-----------------------------|--|---------------|--------------------------|---------|-------------------------------------|-----------------------------|----------|---------------|------------|-------------------------------------|--------------------------|----------|----|----------|-------------------------------------|---------------------|----------|----|----------|--------------------------------------|--|------------------|----|----------|
| U.S. APPLICATION NO. (See 37 CFR 1.6)   |                             | INTERNATIONAL APPLICATION NO.  |               | ATTORNEY'S DOCKET NUMBER |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| 10/582313<br>Not Yet Assigned   |                             | PCT/US2004/041434  |               | P31278-A USA             |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| 24. The following fees are submitted: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"><input checked="" type="checkbox"/></td> <td style="width: 40%;">a) Basic national fee .....</td> <td style="width: 10%; text-align: right;">\$300.00</td> <td style="width: 10%; text-align: center;">Applicant use</td> <td style="width: 10%; text-align: center;">Office use</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>b) Examination fee .....</td> <td style="text-align: right;">\$200.00</td> <td style="text-align: center;">\$</td> <td style="text-align: center;">\$200.00</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>c) Search fee .....</td> <td style="text-align: right;">\$500.00</td> <td style="text-align: center;">\$</td> <td style="text-align: center;">\$100.00</td> </tr> <tr> <td colspan="2" style="text-align: center;"><b>TOTAL OF ABOVE CALCULATIONS =</b></td> <td style="text-align: right;"><b>\$1000.00</b></td> <td style="text-align: center;">\$</td> <td style="text-align: center;">\$600.00</td> </tr> </table> |                             |  |               |                          |         | <input checked="" type="checkbox"/> | a) Basic national fee ..... | \$300.00 | Applicant use | Office use | <input checked="" type="checkbox"/> | b) Examination fee ..... | \$200.00 | \$ | \$200.00 | <input checked="" type="checkbox"/> | c) Search fee ..... | \$500.00 | \$ | \$100.00 | <b>TOTAL OF ABOVE CALCULATIONS =</b> |  | <b>\$1000.00</b> | \$ | \$600.00 |
| <input checked="" type="checkbox"/>   | a) Basic national fee ..... | \$300.00   | Applicant use | Office use               |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| <input checked="" type="checkbox"/>   | b) Examination fee .....    | \$200.00   | \$            | \$200.00                 |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| <input checked="" type="checkbox"/>   | c) Search fee .....         | \$500.00   | \$            | \$100.00                 |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| <b>TOTAL OF ABOVE CALCULATIONS =</b>  |                             | <b>\$1000.00</b>   | \$            | \$600.00                 |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.  |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| Total Sheets  | Extra Sheets                | Number of each additional 50 or fraction thereof (round up to a whole) |               | RATE                     |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| - 100 =   | /50 =                       |  |               | x \$250.00               | \$ 0.00 |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| Surcharge of \$130.00 for furnishing the oath or declaration later than months from the earliest claimed priority date (37 CFR 1.492(e)).   |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| CLAIMS  | NUMBER FILED                | NUMBER EXTRA   | RATE          |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| Total claims  | 21                          | - 20 = 1   | x \$50.00     | \$ 50.00                 |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| Independent claims  | 3                           | - 3 = 0  | x \$200.00    | \$ 0.00                  |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| MULTIPLE DEPENDENT CLAIMS (if applicable) <input checked="" type="checkbox"/> + \$360.00 \$ 720.00  |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| <b>TOTAL OF ABOVE CALCULATIONS = \$ 1,500.00</b>  |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| <input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above are reduced by 1/2.  |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| <b>SUBTOTAL = \$ 1,500.00</b>   |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)).   |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| <b>TOTAL NATIONAL FEE = \$ 1,500.00</b>   |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40 per property + \$ 0.00   |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| <b>TOTAL FEES ENCLOSED = \$ 1,500.00</b>  |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| Amount to be refunded: \$   |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| Amount to be charged: \$  |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.  |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of _____ to cover the above fees. A duplicate copy of this sheet is _____.   |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| c. <input checked="" type="checkbox"/> The Director is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 19-5425. A duplicate copy of this sheet is enclosed.   |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| d. <input checked="" type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING: Information on this form may become public. Credit card information should not be included on this form.</b> Provide credit card information and authorization on PTO-2038.   |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.  |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| SEND ALL CORRESPONDENCE TO:   |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| Joseph A. Tessari<br><b>TREDEGAR FILM PRODUCTS CORPORATION</b><br>1100 Boulders Parkway<br>Richmond, Virginia 23225<br>USA<br>804.330.1047  |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |
| <br>SIGNATURE<br>Stephen J. Driscoll<br>NAME<br>37,564<br>REGISTRATION NUMBER   |                             |  |               |                          |         |                                     |                             |          |               |            |                                     |                          |          |    |          |                                     |                     |          |    |          |                                      |  |                  |    |          |

10/582313  
JAP20 Rec'd PCT/PTO 08 JUN 2006

CERTIFICATE OF MAILING BY EXPRESS MAIL UNDER 37 CFR 1.10

EV917369426 US  
Express Mail Label Number

June 8, 2006  
Date of Deposit

I hereby certify that the attached Transmittal Letter to the United States Designated/Elected Office (DO/EO/US) Concerning a Filing Under 35 U.S.C. 371, including a duplicate copy thereof, a Preliminary Amendment, a Declaration of Inventorship for purposes of the designation of the United States of America (unexecuted), a copy of The International Search Report (PCT/ISA/210), a copy of Notification of Transmittal of the International Search Report and The Written Opinion of the International Searching Authority (PCT/ISA/220), a copy of The Written Opinion of the International Searching Authority (PCT/ISA/237), an Application Data Sheet, and Credit Card Form PTO-2038 for \$1,500.00, are being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to Mail Stop PCT, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

By: Bill Gatta  
Bill Gatta  
SYNNESTVEDT & LECHNER LLP  
2600 Aramark Tower  
1101 Market Street  
Philadelphia, PA 19107-2950  
Telephone: (215) 923-4467  
Facsimile: (215) 923-2189

Patent

10/582313

Express Mail Label No. EV917369426US  
Attorney Docket No. 345 US (31278-A USA)

AP20 Rec'd PCT/PTO 08 JUN 2006

SHEET "A"

The following list represents the "Other items or information:" included as enclosures, under No. 20, to the "Transmittal Letter to the U.S. Designated/Elected Office (DO/EO/US) Concerning A Submission Under 35 U.S.C. 371:

- (1) Certificate of Express Mailing – Express Mail Label No. EV917369426US;
- (2) Application Data Sheet;
- (3) Notification of Transmittal of The International Search Report and The Written Opinion of the International Searching Authority, or the Declaration (Form PCT/ISA/220);
- (4) Written Opinion of the International Searching Authority (Form PCT/ISA/237);
- (5) Form PTO-2038;
- (6) Return Postcard; and
- (7) A duplicate copy of this transmittal correspondence